



# UNITED STATES PATENT AND TRADEMARK OFFICE

*Ren*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,786	04/25/2005	Jiro Hattori	57832US005	6639

32692 7590 04/12/2007  
3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER
----------

LEGESSE, HENOK D

ART UNIT	PAPER NUMBER
----------	--------------

2809

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/12/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com  
LegalDocketing@mmm.com

# Office Action Summary

Application No.

10/532,786

Applicant(s)

HATTORI ET AL.

Examiner

Henok Legesse

Art Unit

2809

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the word "said" is used in the abstract. Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

- On page 7 last paragraph last sentence continuing to page 8, lines 1-2, in the sentence "The size of the ridge-like projection 12 is typically 20 % or less of the width of the ink discharging groove 13 in width and 0.5 to 80 % of the height of the ink discharging groove 13 in height, preferably 10 % or less of the width of the ink discharging groove 13 in width and 5 to 50 % of the height of the ink discharging groove 13 in height." The

- underlined part of this sentence is objected because, since the ridge-like projection 12 defines the ink discharging groove 13 their height (upward direction, see fig.2) is equal. Thus it is unclear how the height of 12 and 13 is different from each other.
- On page 11, line 9, term "Fig. 7(c)"; line 17, term "Fig.7 (D)"; line 19 and line 22, numeral "27 "are objected because there are no corresponding terms in the figures of the disclosure.

Appropriate correction is required.

#### ***Claim Objections***

5. Claims 5-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-7 have not been further treated on the merits.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ackerman (US 5,555,461).

8. Regarding claim 1, Ackerman teaches a head cleaning member [30,31] (fig.1, 2; col.4, lines 8-10) for use with an ink jet printer [10] (fig.1; col.4, line 7) that performs printing on a recording medium by ejecting ink from a recording head [12] (fig.1; col.3, line 50), said cleaning member [30,31] being used in abutment (see fig.3) against an ink ejection surface [23] (fig.1; col.3, lines 56-57) of the recording head [12], in which said head cleaning member [30,31] has a major surface [64] (fig.2; col.6, lines 36-37) having an area (see fig.1, the size of 30,31 and 23) equal to or larger than the ink ejection surface [23] of said recording head [12] and a multiplicity of parallel and fine ink discharging grooves [62] (fig.2; col.6, lines 17-19) are provided on said major surface [64] such that waste ink can flow in a definite direction (col.6, lines 29-33).

9. Regarding claim 2, Ackerman teaches all limitations claimed in claim 1 (see claim 1 rejection above). Ackerman further teaches the ink discharging grooves [62] are integrally formed (col.6, lines 21-23) on the major surface of a base body [64] of said head cleaning member [30,31].

Art Unit: 2809

10. Regarding claim 3, Ackerman teaches all limitations claimed in claim 1 (see claim 1 rejection above). Ackerman further teaches the ink discharging grooves [62] are formed on a surface of a waste ink guiding film [64] adhered to a base body (see fig. 2 and 4) of said head cleaning member [30, 31].

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ackerman (US 5,555,461).

Ackerman discloses the claimed invention ink discharge grooves [62] (fig.2; col.6, lines 17-19) except for the ink discharging grooves have a cross sectional shape selected from the group consisting of U-shape, V-shape, rectangular shape and a combination thereof. Since it is well known in the art to use those different shapes of grooves, it would have been obvious to one ordinary skill in the art to have formed the grooves in the form of U-shape, V-shape, rectangular shape and a combination thereof. Since applicant has not disclosed that any particular shape of a grooves or any particular combination of groove shapes solve any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any one of groove shapes or any combination of those groove shapes.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henok Legesse whose telephone number is (571) 270-1615. The examiner can normally be reached on Mon - FRI, 7:30-5:00, ALT.FRI EST.TIME.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Loke can be reached on (571) 272-1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2809

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\* H.L.  
03/30/2007

  
LISA CAPUTO  
PRIMARY PATENT EXAMINER